



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Srinivasan et al.

Application No. 10/622,841

Filed: July 18, 2003

Confirmation No. 4754

For: CODING OF MOTION VECTOR

INFORMATION

Examiner: Eric Rush

Art Unit: 2609

Attorney Reference No. 3382-66126-01

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INFORMATION DISCLOSURE STATEMENT PURSUANT TO 37 C.F.R. § 1.97(b)(3)

Listed on the accompanying form PTO-1449 and enclosed herewith are several English-language and/or non-English-language documents. Applicants respectfully request that these documents be listed as references cited on the issued patent.

Copies of United States patents and United States published patent applications do not have to be provided to the Patent Office (37 C.F.R. 1.98(a)(2)(ii)). Copies of unpublished U.S. applications do not have to be provided, as long as the application is available on PAIR, as this requirement of 37 C.F.R. § 1.98(a)(2)(iii) has been waived by the United States Patent and Trademark Office pursuant to the Official Gazette Notice on October 19, 2004 (1287 OG 163). Applicants will provide copies of such patents or applications upon request.

Applicants filed this Information Disclosure Statement ("IDS") before the mailing date of a first Office action on the merits. As a result, no fee should be required to file this IDS.

However, if the Patent Office determines that a fee is required for Applicants to file this IDS, please charge any such fees, or credit overpayment, to Deposit Account No. 02-4550. A **duplicate** copy of this Information Disclosure Statement is enclosed.

The filing of this IDS shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or otherwise material to patentability as defined in 37 C.F.R. §1.56.

Respectfully submitted,

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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Attorney Docket Number	3382-66126-01
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Examiner Name	Eric Rush

U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		4,454,546	6.12.1984	Mori
		4,661,849	4.28.1987	Hinman
		4,661,853	4.28.1987	Roeder et al.
		4,691,329	9.1.1987	Juri et al.
		4,695,882	9.22.1987	Wada et al.
		4,796,087	1.3.1989	Guichard et al.
		4,800,432	1.24.1989	Barnett et al.
		4,849,812	7.18.1989	Borgers et al.
		4,862,267	8.29.1989	Gillard et al.
		4,864,393	9.5.1989	Harradine et al.
		4,999,705	3.12.1991	Puri
		5,021,879	6.4.1991	Vogel
		5,068,724	11.26.1991	Krause et al.
		5,089,887	2.18.1992	Robert et al.
		5,091,782	2.25.1992	Krause et al.
		5,103,306	4.7.1992	Weiman et al.
		5,117,287	5.26.1992	Koike et al.

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U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		5,155,594	10.13.1992	Bernstein et al.
		5,157,490	10.20.1992	Kawai et al.
		5,223,949	6.29.1993	Honjo
		5,258,836	11.2.1993	Murata
		5,274,453	12.28.1993	Maeda
		5,298,991	3.29.1994	Yagasaki et al.
		5,319,463	6.7.1994	Hongu et al.
		5,376,971	12.27.1994	Kadono et al.
		5,379,351	1.3.1995	Fandrianto et al.
		5,400,075	3.21.1995	Savatier
		5,412,430	5.2.1995	Nagata
		5,422,676	6.6.1995	Herpel et al.
		RE 34,965	6.13.1995	Sugiyama
		5,448,297	9.5.1995	Alattar et al.
		5,457,495	10.10.1995	Hartung
		5,461,421	10.24.1995	Moon
		5,465,118	11.7.1995	Hancock et al.

EXAMINER	DATE
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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		5,467,086	11.14.1995	Jeong
		RE 35,093	11.21.1995	Wang et al.
	,	5,491,523	2.13.1996	Sato
		RE 35,158	2.20.1996	Sugiyama
		5,510,840	4.23.1996	Yonemitsu et al.
		5,517,327	5.14.1996	Nakatani et al.
		5,539,466	7.23.1996	Igarashi et al.
		5,544,286	8.6.1996	Laney
		5,546,129	8.13.1996	Lee
		5,550,541	8.17.1996	Todd
		5,552,832	9.3.1996	Astle
		5,598,215	1.28.1997	Watanabe
		5,598,216	1.28.1997	Lee
		5,617,144	4.1.1997	Lee
		5,619,281	4.8.1997	Jung
		5,623,311	4.22.1997	Phillips et al.
		5,654,771	8.5.1997	Tekalp et al.

EXAMINER	DATE
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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		5,659,365	8.19.1997	Wilkinson
		5,666,461	9.9.1997	Igarashi et al.
		5,668,608	9.16.1997	Lee
		5,668,932	9.16.1997	Laney
		5,689,306	11.18.1997	Jung
		5,692,063	11.25.1997	Lee et al.
		5,699,476	12.16.1997	Van Der Meer
		5,748,789	5.5.1998	Lee et al.
		5,784,175	7.21.1998	Lee
		5,786,860	7.28.1998	Kim et al.
		5,787,203	7.28.1998	Lee et al.
		5,796,855	8.18.1998	Lee
		5,799,113	8.25.1998	Lee
		RE 35,910	9.29.1998	Nagata et al.
		5,825,830	10.20.1998	Kopf
		5,825,929	10.20.1998	Chen et al.
		5,835,144	11.10.1998	Matsumura et al.

EXAMINER	DATE
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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
-		5,835,149	11.10.1998	Astle
		5,844,613	12.1.1998	Chaddha
		5,874,995	2.23.1999	Naimpally et al.
		5,901,248	5.4.1999	Fandrianto et al.
		5,929,940	7.27.1999	Jeannin
		5,946,043	8.31.1999	Lee et al.
		5,949,489	9.7.1999	Nishikawa et al.
		5,963,258	10.5.1999	Nishikawa et al.
		5,963,259	10.5.1999	Nakaya et al.
		5,963,673	10.5.1999	Kodama et al.
		5,970,173	10.19.1999	Lee et al.
		5,970,175	10.19.1999	Nishikawa et al.
		5,973,755	10.26.1999	Gabriel
		5,982,437	11.9.1999	Okazaki et al.
		5,982,438	11.9.1999	Lin et al.
		5,990,960	11.23.1999	Murakami et al.
		5,991,447	11.23.1999	Eifrig et al.

EXAMINER	DATE
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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		6,002,439	12.14.1999	Murakami et al.
		6,005,980	12.21.1999	Eifrig et al.
in the second se		RE 36,507	1.18.2000	Iu
•		6,035,070	3.7.2000	Moon et al.
		6,052,150	4.18.2000	Kikuchi
		6,058,212	5.2.2000	Yokohama
		6,067,322	5.23.2000	Wang
		6,097,759	8.1.2000	Murakami et al.
		6,111,914	8.29.2000	Bist
		6,130,963	10.10.2000	Uz et al.
		6,148,027	11.14.2000	Song et al.
		6,148,033	11.14.2000	Pearlstein et al.
		6,154,495	11.28.2000	Yamaguchi et al.
		6,188,725	2.13.2001	Sugiyama
·		6,188,794	2.13.2001	Nishikawa et al.
	,	6,208,761	3.27.2001	Passagio et al.
		6,215,905	4.10.2001	Lee et al.

EXAMINER	DATE
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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		6,219,070	4.17.2001	Baker et al.
		6,219,464	4.17.2001	Greggain et al.
		6,233,017	5.15.2001	Chaddha
		6,263,024	7.17.2001	Matsumoto
		6,275,531	8.14.2001	Li
		6,281,942	8.28.2001	Wang
		6,282,243	8.28.2001	Kazui et al.
		6,289,049	9.11.2001	Kim et al.
		6,292,585	9.18.2001	Yamaguchi et al.
		6,295,376	9.25.2001	Nakaya
1		6,307,887	10.23.2001	Gabriel
		6,307,973	10.23.2001	Nishikawa et al.
		6,320,593	11.20.2001	Sachs et al.
		6,337,881	1.8.2002	Chaddha
		6,339,656	1.15.2002	Marui
		6,377,628	4.23.2002	Schultz et al.
		6,381,279	4.30.2002	Taubman

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SIGNATURE:	CONSIDERED:	
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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		6,396,876	5.28.2002	Babonneau et al.
		6,404,813	6.11.2002	Haskell et al.
		6,418,166	7.9.2002	Wu et al.
		6,430,316	8.6.2002	Wilkinson
		6,441,842	8.27.2002	Fandrianto et al.
		6,496,608	12.17.2002	Chui
		6,529,632	3.4.2003	Nakaya et al.
		6,539,056	3.25.2003	Sato et al.
		6,563,953	5.13.2003	Lin et al.
		6,650,781	11.18.2003	Nakaya
		6,950,469	9.27.2005	Karczewicz et al.
		6,968,008	11.22.2005	Ribas-Corbera et al.
		6,983,018	1.3.2006	Lin et al.
		7,023,919	4.4.2006	Cho et al.
		2002/0186890	12.12.2002	Lee et al.
	ı	2003/0099292	5.29.2003	Wang et al.

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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		2003/0112864	6.19.2003	Karczewicz et al.
		2003/0113026	6.19.2003	Srinivasan et al.
		60/488,710	7.18.2003	Srinivasan et al.
		2003/0152146	8.14.2003	Lin et al.
		2003/0156646	8.21.2003	Hsu et al.
		60/501,081	9.7.2003	Srinivasan et al.
		60/501,133	9.7.2003	Holcomb et al.
		2003/0202705	10.30.2003	Sun
		2005/0013497	1.20.2005	Hsu et al.
		2005/0100093	5.12.2005	Holcomb
		2005/0226335	10.13.2005	Lee et al.
		2006/0013307	1.19.2006	Olivier et al.

FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No. (optional)	Country	Number	Publication Date	Name of Applicant or Patentee
		Europe	EP 0 279 053	8.24.1988	Grotz et al.
•		Europe	EP 0 397 402	11.14.1990	Nagata et al.
		Europe	EP 0 526 163	2.3.1993	Nagata

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		Europe	EP 0 540 350	5.5.1993	Murakami et al.	
		Europe	EP 0 588 653	3.23.1994	Murashita et al.	
		Europe	EP 0 614 318	9.7.1994	Dachiku et al.	
		Europe	EP 0 625 853	11.24.1994	Watanabe	
		Europe	EP 0 651 574	5.3.1995	Kato	
		Europe	EP 0 771 114	5.2.1997	Lee et al.	
		Europe	EP 0 786 907	7.30.1997	Srivastava	
		Europe	EP 0 825 778	2.25.1998	Vargas et al.	
		Europe	EP 0 830 029	3.18.1998	Fischer	
		Europe	EP 0 884 912	12.16.1998	Nakaya	
		Europe	EP 0 944 245	9.22.1999	ST Microelectronics (Piccinelli et al.)	
		Great Britain	GB 2,328,337	2.17.1999	Dae Woo Electronics (Lee)	
		Great Britain	GB 2,343,579	5.10.2000	Walter	
		Japan	JP 61205086	9.11.1986	Murakami et al.	
		Japan	JP 62 213 494	9.19.1987	Wada et al.	
		Japan	JP 3001688	1.8.1991	Kamikura et al.	
		Japan	JP 3 129 986	3.6.1991	Igarashi et al.	

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		Japan	JP 6 078 295	3.18.1994	Murakami et al.	
		Japan	JP 6 078 298	3.18.1994	Nakajima	
		Japan	JP 06-276481	9.30.1994	Okazaki et al.	
		Japan	JP 06-276511	9.30.1994	Kato	
		Japan	JP 6292188	10.18.1994	Fukuda et al.	
		Japan	JP 7-274171	10.20.1995	Suwa	
		Japan	JP 08-140099	5.31.1996	Haranishi	
		Japan	JP 09-322163	12.12.1997	Suzuki et al.	
		Japan	JP 10 056 644	2.24.1998	Osada	
		PCT	WO 00/33581	8.6.2000	Lin et al.	
	N .	PCT	WO 03/026296	3.27.2003	Karczewicz et al.	
Examiner's Initials*	Cite No. (optional)		ОТН	IER DOCUMENTS	3	
		Bartkowiak et al., "Color Video Compression Based on Chrominance Vector Quantization," 7th Int'l Workshop on Systems, Signals and Image Processing, IWSSIP 2000, Maribor 7-9 VI, pp. 107-110 (2000). Benzler et al., "Improving multiresolution motion compensating hybrid coding by drift reduction," Picture Coding Symposium, 4 pp. (1996).				
		Benzler et al., "Motion and aliasing compensating prediction with quarter-pel accuracy and adaptive overlapping blocks as proposal for MPEG-4 tool evaluation - Technical description," ISO/IEC JTC1/SC29/WG11, MPEG 95/0552, 5 pp. (document marked 1995).				

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		Benzler, "Results of core experiments P8 (Motion and Aliasing Compensating Prediction)," ISO/IEC JTC1/SC29/WG11, MPEG 97/2625, 8 pp. (document marked 1997).
		Borman et al., "Block-matching Sub-pixel Motion Estimation from Noisy, Under-Sampled Frames an Empirical Performance Evaluation," SPIE Visual Comm. & Image Processing, 10 pp. (1999).
		Conklin et al., "Multi-resolution Motion Estimation," Proc. ICASSP '97, Munich, Germany, 4 pp. (1997).
		Davis et al., "Equivalence of subpixel motion estimators based on optical flow and block matching," Proc. IEEE Int'l Symposium on Computer Vision, pp. 7-12 (1995).
		de Haan et al., "Sub-pixel motion estimation with 3-D recursive search block-matching," Signal Processing: Image Comm.6, pp. 229-239 (1994).
		"DivX Multi Standard Video Encoder," 2 pp. (Downloaded from the World Wide Web on January 24, 2006). "
		Ericsson, "Fixed and Adaptive Predictors for Hybrid Predictive/Transform Coding," IEEE Transactions on Comm., Vol. COM-33, No. 12, pp. 1291-1302 (1985).
		Flierl et al., "Multihypothesis Motion Estimation for Video Coding," Proc. DCC, 10 pp. (March 2001).
		Fogg, "Survey of Software and Hardware VLC Architectures," SPIE, Vol. 2186, pp. 29-37 (no date of publication).
		Girod, "Efficiency Analysis of Multihypothesis Motion-Compensated Prediction for Video Coding," IEEE Transactions on Image Processing, Vol. 9, No. 2, pp. 173-183 (February 2000).
	·	Girod, "Motion Compensation: Visual Aspects, Accuracy, and Fundamental Limits," Motion Analysis and Image Sequence Processing, Kluwer Academic Publishers, pp. 125-152 (1993).
		Girod, "Motion-Compensating Prediction with Fractional-Pel Accuracy," IEEE Transactions on Comm., Vol. 41, No. 4, pp. 604-612 (1993).
		Horn et al., "Estimation of Motion Vector Fields for Multiscale Motion Compensation," Proc. Picture Coding Symp. (PCS 97), pp. 141-144 (Sept. 1997).
		Hsu et al., "A Low Bit-Rate Video Codec Based on Two-Dimensional Mesh Motion Compensation with Adaptive Interpolation," IEEE Transactions on Circuits and Systems for Video Technology, Vol. II, No. 1, pp. 111-117 (January 2001).

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		IBM Technical Disclosure Bulletin, "Advanced Motion Estimation for Moving Picture
		Expert Group Encoders," Vol. 39, No. 4, pp. 323-324 (April 1996).
		ISO/IEC, "MPEG-4 Video Verification Model Version 10.0," ISO/IEC
		JTC1/SC29/WG11, MPEG98/N1992, (ed. Ebrahimi) (document marked February 1998).
]		ITU - Q15-F-24, "MVC Video Codec - Proposal for H.26L," Study Group 16, Video
		Coding Experts Group (Question 15), 28 pp. (document marked as generated in 1998).
		Iwahashi et al., "A Motion Compensation Technique for Downscaled Pictures in Layered
<u>}</u>		Coding," IEICE Transactions on Comm., Vol. E77-B, No. 8, pp. 1007-1012 (August 1994).
		Jeong et al., "Adaptive Huffman Coding of 2-D DCT Coefficients for Image Sequence
		Compression," Signal Processing: Image Communication, Vol. 7, 11 pp. (1995).
		Joint Video Team (JVT) of ISO/IEC MPEG and ITU-T VCEG, "Joint Committee Draft
		(CD)," JVT-C167, 3rd Meeting: Fairfax, Virginia, USA, 142 pp. (May 2002).
		Joint Video Team of ISO/IEC MPEG and ITU-T VCEG, "Final Joint Committee Draft of
		Joint Video Specification (ITU-T Recommendation H.264, ISO/IEC 14496-10 AVC," 206 pp. (August 2002).
		Keys, "Cubic Convolution Interpolation for Digital Image Processing," IEEE Transactions on Acoustics, Speech & Signal Processing, Vol. ASSP-29, No. 6, pp. 1153-1160 (1981).
		Konrad et al., "On Motion Modeling and Estimation for Very Low Bit Rate Video Coding," Visual Comm. & Image Processing (VCIP '95), 12 pp. (May 1995).
		Kossentini et al., "Predictive RD Optimized Motion Estimation for Very Low Bit-rate Video Coding," IEEE J. on Selected Areas in Communications, vol. 15, no. 9 pp. 1752-
		1763 (December 1997)
*		Lopes et al., "Analysis of Spatial Transform Motion Estimation with Overlapped
		Compensation and Fractional-pixel Accuracy," IEEE Proc. Visual Image Signal
		Processing, Vol. 146, No. 6, pp. 339-344 (December 1999).
		Microsoft Corp., "Microsoft Debuts New Windows Media Player 9 Series, Redefining
		Digital Media on the PC," 4 pp. (document marked September 4, 2002) [Downloaded
		from the World Wide Web on May 14, 2004].
		Morimoto et al., "Fast Electronic Digital Image Stabilization," Proc. ICPR, Vienna, Austria, 5 pp. (1996).
		Overview of MPEG-2 Test Model 5," 5 pp. [Downloaded from the World Wide Web on
		March 1, 2006]. "

EXAMINER SIGNATURE:	DATE CONSIDERED:
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^{*} Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

Attorney Docket Number	3382-66126-01
Application Number	10/622,841
Filing Date	July 18, 2003
First Named Inventor	Holcomb
Art Unit	2609
Examiner Name	Eric Rush

Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS
		Ribas-Corbera et al., "On the Optimal Block Size for Block-based Motion-Compensated Video Coders," SPIE Proc. of Visual Comm. & Image Processing, Vol. 3024, 12 pp. (1997).
		Ribas-Corbera et al., "On the Optimal Motion Vector Accuracy for Block-based Motion-Compensated Video Coders," Proc. SPIE Digital Video Compression, San Jose, CA, 13 pp. (1996).
		Schultz et al., "Subpixel Motion Estimation for Super-Resolution Image Sequence Enhancement," Journal of Visual Comm. & Image Representation, Vol. 9, No. 1, pp. 38-50 (March 1998).
		Sullivan et al., "The H.264/AVC Advanced Video Coding Standard: Overview and Introduction to the Fidelity Range Extensions," 21 pp. (August 2004).
		"The TML Project WEB-Page and Archive," (including pages of code marked "image.cpp for H.26L decoder, Copyright 1999" and "image.c"), 24 pp. [Downloaded from the World Wide Web on June 1, 2005].
		Triggs, "Empirical Filter Estimation for Subpixel Interpolation and Matching," Int'l Conf. Computer Vision '01, Vancouver, Canada, 8 pp. (July 2001).
		Triggs, "Optimal Filters for Subpixel Interpolation and Matching," Int'l Conf. Computer Vision '01, Vancouver, Canada, 10 pp. (July 2001).
		Video Coding Using Wavelet Decomposition for Very Low Bit-Rate Networks," 16 pp. (1997).
		Wang et al., "Interlace Coding Tools for H.26L Video Coding," ITU-T SG16/Q.6 VCEG-O37, pp. 1-20 (December 2001).
		Weiss et al., "Real Time Implementation of Subpixel Motion Estimation for Broadcast Applications," pp. 7/1-7/3 (1990).
		Wiegand et al., "Long-term Memory Motion Compensated Prediction," IEEE Transactions on Circuits & Systems for Video Technology, vol. 9, no. 1, pp. 70-84 (February 1999).
		Wiegand, "Joint Model Number 1, Revision 1 (JM1-r1)," JVT-A003R1, Pattaya, Thailand, 80 pp. (December 2001) [document marked "Generated: 2002-01-18"].
		Wien, "Variable Block-Size Transforms for Hybrid Video Coding," Dissertation, 182 pp. (February 2004).
		Wu et al., "Joint estimation of forward and backward motion vectors for interpolative prediction of video," IEEE Transactions on Image Processing, Vol. 3, No. 5, pp. 684-687 (September 1994).

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		Yang et al., "Very High Efficiency VLSI Chip-pair for Full Search Block Matching with Fractional Precision," Proc. ICASSP/IEEE Int'l Conf. on Acoustics, Speech & Signal Processing, Glasgow, pp. 2437-2440 (May 1989).
		Zhang et al., "Adaptive Field/Frame Selection for High Compression Coding," MERL TR-2003-29, 13 pp. (January 2003).

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